

EP 958719 Patent Family

10/9/3

DIALOG(R)File 351:Derwent WPI

(c) 2004 Thomson Derwent. All rts. reserv.

012020961 **Image available**

WPI Acc No: 1998-437871/199837 XRPX Acc No: N98-341141

Printed circuit boards sub-rack front system with lockable lever draw grip - includes locking slide mounted in lever draw grip and provided with end pressure zone

Patent Assignee: SIEMENS AG (SIEI); RITTAL ELECTRONIC SYSTEMS GMBH & CO KG (RITT-N)

Inventor: BILLENSTEIN E; KOERBER W; SCHAFFER K

Number of Countries: 021 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9834449	A1	19980806	WO 97DE212	A	19970203	199837 B
EP 958719	A1	19991124	EP 97914119	A	19970203	199954
			WO 97DE212	A	19970203	
CN 1235749	A	19991117	CN 97199307	A	19970203	200013
			WO 97DE212	A	19970203	
US 6094353	A	20000725	WO 97DE212	A	19970203	200038
			US 99365778	A	19990803	
JP 2001511309	W	20010807	WO 97DE212	A	19970203	200150
			JP 98532423	A	19970203	
EP 958719	B1	20020522	EP 97914119	A	19970203	200241
			WO 97DE212	A	19970203	
DE 59707341	G	20020627	DE 507341	A	19970203	200243
			EP 97914119	A	19970203	
			WO 97DE212	A	19970203	
ES 2175384	T3	20021116	EP 97914119	A	19970203	200304 N

Priority Applications (No Type Date): WO 97DE212 A 19970203

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9834449	A1	G	31	H05K-007/14	
				Designated States (National): CN JP US	
				Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE	
EP 958719	A1	G			Based on patent WO 9834449
				Designated States (Regional): AT CH DE ES FR GB IT LI NL SE	
US 6094353	A			H05K-005/00	Cont of application WO 97DE212
JP 2001511309	W		25	H05K-007/14	Based on patent WO 9834449
EP 958719	B1	G		H05K-007/14	Based on patent WO 9834449
				Designated States (Regional): AT CH DE ES FR GB IT LI NL SE	
DE 59707341	G			H05K-007/14	Based on patent EP 958719
					Based on patent WO 9834449
ES 2175384	T3			H05K-007/14	Based on patent EP 958719

Abstract (Basic): WO 9834449 A

A front system for electrical circuit boards (37) slidable into and out of sub-racks (55) via guide rails (36) in which the front element (38,11) is mounted on the frontal end-face (56) of a circuit board (37), and includes a lever draw-grip (1) located on the top or bottom of the front element and hinge-mounted via a point of rotation (5,12) in the plane of the circuit board.

A latching or locking slide (10) is mounted in a lever draw grip (1) and has a pressure zone (27), at the end of one of the lever draw grips (1), which lies opposite the engagement zone (6). Tensioners (43,32,28,29,35) exert a pre-tension on the locking slide (10) towards

the pressure zone (27) to retain the slide (10) in an output or exit position, and locking/latching devices (22,23,26) are arranged on the top or bottom corner of the front element (38,11) and as the lever draw-grip (1) swivels on to the locking slide (10), the tensioners and the front-element (38,11) engage, and the locking devices are released again, as a result of a shift of the locking slide (10) against the pre-tension force (52,53) of the tensioners (43,32,28,29,35).

USE - For printed circuit boards.

ADVANTAGE - Easier operation owing to lever draw grip.

Dwg.5/7

Title Terms: PRINT; CIRCUIT; BOARD; SUB; RACK; FRONT; SYSTEM; LOCK; LEVER;

DRAW; GRIP; LOCK; SLIDE; MOUNT; LEVER; DRAW; GRIP; END; PRESSURE; ZONE

Derwent Class: V04

International Patent Class (Main): H05K-005/00; H05K-007/14

International Patent Class (Additional): H05K-007/12

File Segment: EPI

Manual Codes (EPI/S-X): V04-T01C; V04-T02